Human WFS1 Antibody

Monoclonal Mouse IgG_{2B} Clone # 1057230

Catalog Number: MAB7417

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human WFS1 in direct ELISA.
Source	Monoclonal Mouse IgG_{2B} Clone # 1057230
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	E. coli derived recombinant human WFS1 Arg653-Phe783 Accession # O76024
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

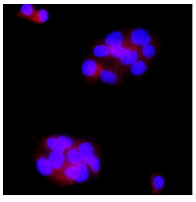
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

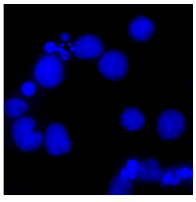
	Recommended Concentration	Sample
Immunocytochemistry	8-25 µg/mL	Immersion fixed HepG2 Human Hepatocellular Carcinoma Cell Line (Positive) and HEL 92.1.7 Human Erythroleukemic Cell Line (Negative) Cells.

DATA

Immunocytochemistry



HepG2 (Positive) cells



HEL92.1.7 (Negative) cells

Detection of WFS1 in HepG2 Human Hepatocellular Carcinoma Cell Line (Positive) and HEL 92.1.7 Human Erythroleukemic Cell Line (Negative) Cells. WFS1 was detected in immersion fixed HepG2 Human Hepatocellular Carcinoma Cell Line (Positive) and HEL 92.1.7 Human Erythroleukemic Cell Line (Negative) Cells using Mouse Anti-Human WFS1 Monoclonal Antibody (Catalog # MAB7417) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

WFS1 (Wolframin Syndrome gene 1; also Wolframin) is a 100-105 kDa intracellular glycoprotein that contains an unusual eleven transmembrane (TM) topology. It is widely expressed, being found in neurons, fibroblasts, hepatocytes, stratified squamous epithelium and pancreatic β-cells. WFS1 is found in the ER and select secretory vesicles. It is known to be induced by ER stress, which prompts it to increase Ca^{++} in the ER, a condition necessary for proper protein folding. It also contributes to the maintenance of the proper pH in insulin-containing granules. Human WSF1 is 890 amino acids (aa) in length. It is a type II 11-TM protein that possesses a cytoplasmic N-terminus (aa 1-313) and transmembrane-embedded C-terminus (aa 870-890). WSF1 is reported to form homodimers and homotetramers. There are multiple mutations in the WFS1 gene that contribute to Wolfram syndrome. Among these are an isoform that generates a premature truncation at Ser157, a second isoform that possesses a seven aa substitution for aa 509-890, and a third isoform which shows a deletion of aa 508-512. Over aa 679-783, human WFS1 shares 95% aa sequence identity with mouse WFS1.

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